

The Claims

1-33 (cancelled)

34. (Currently amended) An alignment device for alignment of a weapon ~~and~~ with a weapon simulator mounted on the weapon, wherein the weapon is provided with a sights oriented along a sighting axis and wherein the weapon simulator is equipped with a first device arranged to emit an electromagnetic simulator beam exiting along a simulator axis, the alignment apparatus comprising:

a second device mounted on the weapon arranged to generate an alignment beam along an alignment axis, wherein the angle between the simulator axis and the alignment axis is fixed and known;

a reflection device arranged to reflect the alignment beam into the sight; and

means of adjustment arranged to collectively guide the alignment axis and the simulator axis during the alignment of the simulator axis with the sights so that the axes during the alignment maintain the fixed relative angular relationship whereby a user looking through the sights can ensure that the sighting and simulator axes are codirectional.

35. (Withdrawn) The alignment device according to claim 34, wherein the reflection device comprises a first mirror and a second mirror that function as a roof prism and deflect the alignment beam by 90° and a third mirror placed at such a distance from the first and second mirrors and at such an angle relative to them that the alignment beam is reflected into the sights with the alignment axis parallel to the simulator axis.

36. (Previously Presented) The alignment device according to claim 34, wherein the reflection device comprises a prism with first reflecting surfaces and a second reflecting surface arranged at such an angle relative to each other that the alignment beam is deflected back into the sights with the alignment axis parallel to the simulator axis.

37. (Previously Presented) The alignment device according to claim 34, wherein the reflection device comprises a reversing prism dimensioned so that the alignment beam is deflected back into the sight, and where an optical wedge is arranged in the pathway of the alignment beam by the reversing prism, whereby the optical wedge refracts the alignment beam so that the alignment axis at the sights becomes parallel with the simulator axis.

38. (Withdrawn) The alignment device according to claim 36, wherein the prism comprises a transparent part at least at the line of sights of the sight, whereby aiming can still be carried out even though the prism is placed in or in front of the sight.

39. (Previously Presented) The alignment device according to claim 34, wherein the fixed angle between the simulator axis and the alignment axis is zero degrees, that is, the axes are mutually parallel.

40. (Previously Presented) The alignment device according to claim 39, wherein the alignment beam and the simulator beam exit in the same direction and wherein the reflection device reflects the alignment beam in the opposite direction.

41. (Withdrawn) The alignment device according to claim 40, wherein the reflection device comprises a projection screen.

42. (Withdrawn) The alignment device according to claim 40, wherein the reflection device comprises a collimator.

43. (Previously Presented) The alignment device according to claim 40, wherein the reflection device comprises a reversing prism column.

44. (Previously Presented) The alignment device according to claim 43, wherein the reversing prism column comprises a transparent part at least in the line of sights of the sight, whereby aiming can be carried out despite the fact that the reversing prism column is placed in or in front of the sight.

45. (Previously Presented) The alignment device according to claim 34, wherein a reticle is arranged in the beam path of the alignment beam in the focal plane of an optical system.

46. (Previously Presented) The alignment device according to claim 45, wherein the reticle is illuminated with the aid of means for guiding ambient light to the reticle.

47. (Previously Presented) The alignment device according to claim 45, wherein the reticle is illuminated by an artificial light source.

48. (Previously Presented) The alignment device according to claim 34, wherein the alignment beam and the simulator beam have common focussing optical elements for their focussing.

49. (Previously Presented) The alignment device according to claim 48, wherein the alignment beam and the simulator beam are generated by components that are mechanically attached to each other in the focal plane of the common optical system.

50. (Previously Presented) The alignment device according to claim 34, arranged in a module demountable from the simulator.

51. (Previously Presented) The alignment device according to claim 50, wherein the demountable module includes at least one of the second device, the reflection device and a reticle.

52. (Previously Presented) The alignment device according to claim 51, wherein the demountable module includes parts of the means of adjustment.

53. (Previously Presented) The alignment device according to claim 45, wherein an alignment mark of the reticle is designed with graphical symbols, such as arrows or equivalent pointers, so that it gives a graphical guidance in which direction the means of adjustment must be set when alignment is to be carried out.

54. (Currently amended) A weapon simulator mountable on a weapon with a sight, said weapon simulator comprising a first device arranged to emit an electromagnetic simulator beam exiting along a simulator axis and the alignment apparatus according to claim [[1]] 34.

55. (Currently amended) A weapon having a sights and provided with ~~the~~ a weapon simulator and the alignment device according to claim [[21]] 34.

56. (Previously Presented) A method of alignment of a weapon and a weapon simulator mounted onto the weapon, the method comprising:

emitting with the simulator an electromagnetic simulator beam that exits along a simulator axis;

generating with the simulator an alignment beam along an alignment axis, which forms a fixed and known angle relative to the simulator axis;

collectively guiding the alignment axis and the simulator axis with a means of adjustment so that the axes during an alignment or during an adjustment of the alignment maintain the fixed relative angular relationship to each other; and

adjusting the alignment axis to be parallel with a sighting axis of a sights of the weapon.

57. (Previously Presented) The method according to claim 56, wherein the simulator beam is caused to be reflected from a wavelength converter material, whereby visible light is emitted and used as the alignment beam.

58. (Previously Presented) The method according to claim 56, wherein the alignment beam produces an alignment mark that becomes visible to the firer when the sights of the weapon is used.

59. (Previously Presented) The method according to claim 58, wherein the alignment mark is made visible only in association with the conduct of an alignment or a check of the alignment.

60. (Previously Presented) The method according to claim 58, wherein the alignment mark is made visible in association with every shot fired by the weapon so that the firer obtains confirmation that a simulation shot has been fired and that the alignment is still correct.

61. (Previously Presented) The method according to claim 56, wherein the alignment beam and the simulator beam are focused by the same optical components.